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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,453	09/10/2003	David Walter Carr	15361-US-CONT	2235
23553	7590	06/01/2007		
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P.O. BOX 957			TRAN, PHUC H	
STATION B				
OTTAWA, ON K1P 5S7			ART UNIT	PAPER NUMBER
CANADA			.2616	
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			06/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/658,453

Applicant(s)

CARR ET AL.

Examiner

PHUC H. TRAN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09200400.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Ganmukhi et al. (U.S. Patent No. 5850399).

- With respect to claims 1, 10, 30 and 32, Ganmukhi teaches a device (e.g. Fig. 1 with blocks 15, 10, 80 and 90) for scheduling virtual channel connections carrying cell traffic of different categories of service onto a virtual path connection (e.g. with different VC 15 to 100 in fig. 1) comprising: aggregating means for aggregating virtual channel connections of similar categories of service into a single cell stream (e.g. VCs to output 100 in Fig. 1).

- With respect to claim 2, Ganmukhi teaches wherein virtual channel connections carrying different categories of service are queued in separate queues (e.g. block 15 in Fig. 1 shows the different categories with separate queues).

- With respect to claims 3-4 and 31, Ganmukhi teaches wherein said aggregating means includes means to form groups of said separate queues (e.g. Fig.1 shows form groups of different VCs).

- With respect to claim 5, Ganmukhi teaches wherein said aggregation means includes means to form per-VCC like-service-category queues and said arbitration means arbitrates priority as between said like-category-queues (see fig. 1 shows the VCs).

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- With respect to claims 6-7, Ganmukhi teaches wherein said arbitration means includes means to arbitrate priority as between said separate queues within said groups of queues (e.g. priorities in Fig. 1).

- With respect to claims 8-9, Ganmukhi teaches including shaper means to determine egress time of cells in said single cell stream (e.g. level 1 of Fig. 1 shows shaper for time).

- With respect to claims 11, 13-14, and 24-25, Ganmukhi teaches in an ATM data communications network utilizing virtual channel connections wherein said virtual channel connections are aggregated at an aggregation point onto virtual path connections, an apparatus for shaping ATM cell traffic (e.g. Fig. 1 shows blocks 15, 10, 80 and 90 for ATM data communication utilizing VCs) comprised of various categories of service onto said virtual path connection, said apparatus comprising: queuing means for queuing cells from each of said virtual channel connections (e.g. block 15 in fig. 1); arbitration means to arbitrate between said virtual channel connection traffic (e.g. first level in Fig. 1); and a virtual path connection shaper to determine egress emission time of cells from said arbitration means onto said virtual path connection (e.g. second level in Fig. 1).

- With respect to claim 12, Ganmukhi teaches wherein said virtual channel connections carry different categories of service cell traffic (e.g. different VCs shows in Fig. 1).

- With respect to claim 15, Ganmukhi teaches further including second arbitration means to arbitrate priority as between categories of service (e.g. first level shows the priority between VCs as CBR, VBR, ABR).

- With respect to claims 16-17, Ganmukhi teaches wherein said categories of service comprise real time and non-real time service classes (e.g. CBR and UBR in Fig. 1).

- With respect to claim 18, Ganmukhi teaches wherein said non-real time class of service includes non-real time variable bit rate (nrtVBR) available bit rate (ABR) and unspecified bit rate (UBR) (see fig. 1).

- With respect to claim 19, Ganmukhi teaches wherein said shaper determines egress time of cells in accordance with traffic descriptors (e.g. block 80 in Fig. 1).

- With respect to claims 20, 26 and 33, Ganmukhi teaches wherein said traffic descriptors include peak cell rate (PCR), sustained cell rate (SCR) and maximum burst size (MBS) (e.g. the nrt-VBR, ABR and UBR in Fig. 1).

- With respect to claims 21-23, 27-29, and 34-40, Ganmukhi teaches wherein said second arbitration means utilizes an exhaustive round-robin arbitration scheme (e.g. RR and WRR in fig. 1).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al. (U.S. Patent No. 7154896 B1) discloses ATM traffic having unknown characteristics including traffic with weighted priorities and traffic without weighted priorities.

Willmann et al. (U.S. Patent No. 5521923) discloses method and facility for temporarily storing data packets, and exchange with such a facility.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHI PHAM can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuc Tran
Assistant Examiner
Art Unit 2616

P.t
5/29/07


CHI PHAM
SUPERVISORY PATENT EXAMINER
5/29/07